

## ABSTRACT

A sensing apparatus is provided which comprises a chip (20) in which a transmission line (2) for propagating an electromagnetic wave is formed on a substrate (1), an electromagnetic wave generator (7) for generating an electromagnetic wave (10), a coupling means (9), and a detector (5) for detecting a propagation state of an electromagnetic wave at an arbitrary location on the transmission line, of the electromagnetic wave propagating through the transmission line (2). An interaction between an object (4) disposed in the vicinity of the transmission line (2) and the electromagnetic wave is detected by the detector (5) to sense a spatial interaction state of the object (4) with the electromagnetic wave.